

*Supplementary Information (SI)*

## **Selection and Community Analysis of Halophiles Mixed Exoelectrogens from Salt Lake Soils**

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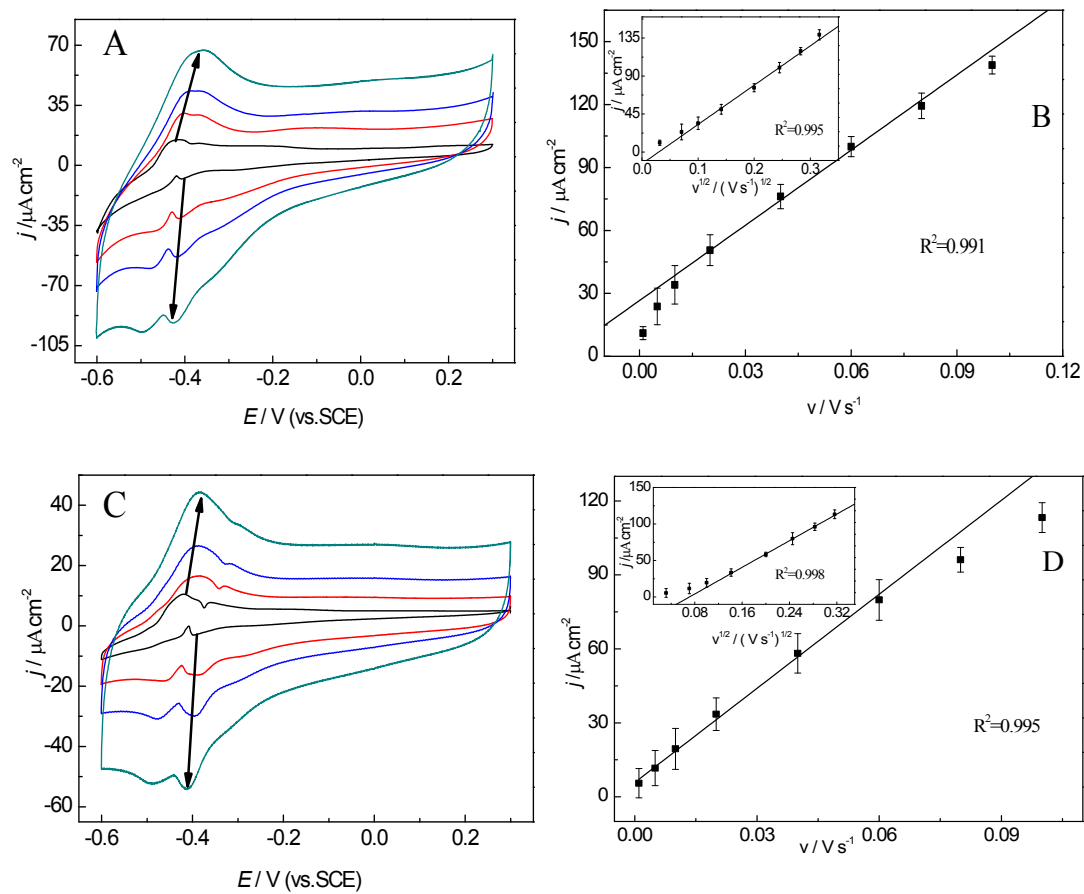


Fig. S1 Cyclic voltammograms of biofilms at different scan rates (A) ESA, (C) ESB (arrows showed representative scan rates at 1, 5, 10, 20 mV/s, respectively); Dependence of reduction current density ( $j_p$ ) versus scan rate ( $v$ ) on biofilms, (B) ESA, (D) ESB, Inset: linear dependence of  $j_p$  versus  $v^{1/2}$  on biofilms.

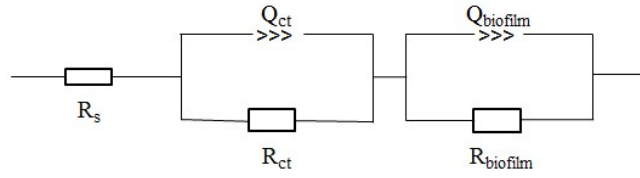


Fig. S2 Equivalent circuits for anode EIS,  $R_s$ ,  $R_{ct}$ ,  $R_{biofilm}$ , refers to solution resistance, charge transfer resistance, biofilm resistance, respectively.  $Q$  was a distributed element (known as constant phase element [CPE])

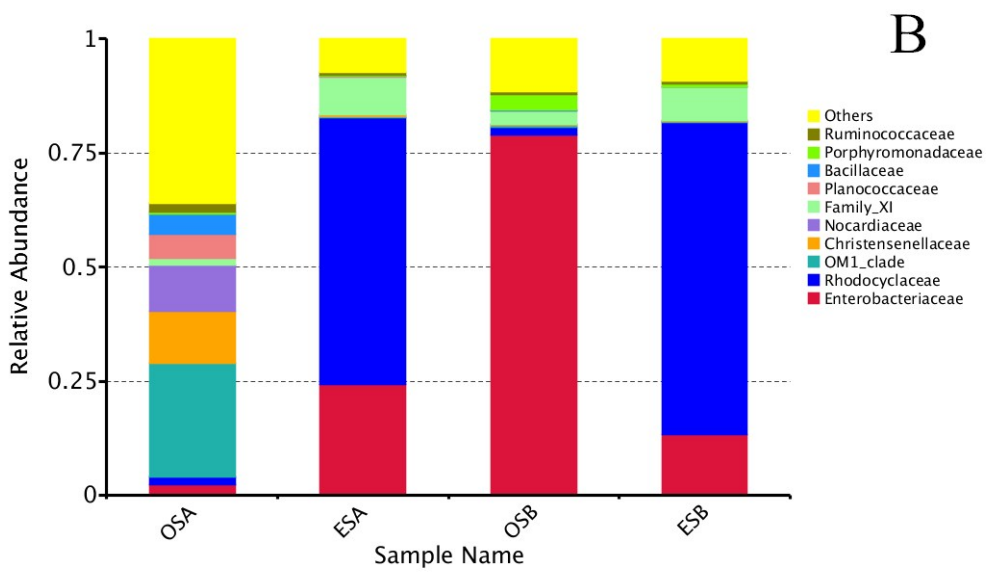
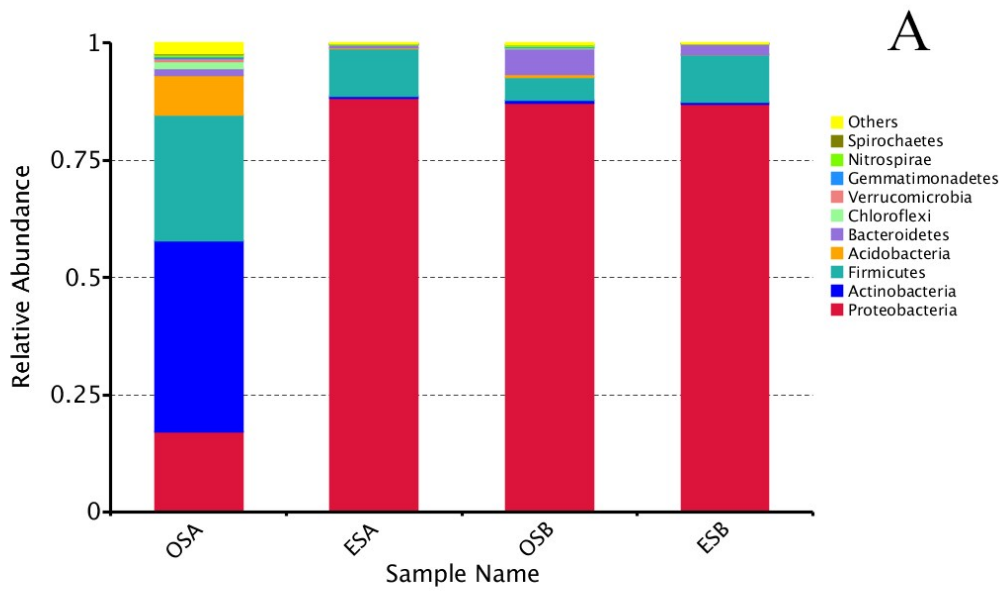


Fig. S3 Mean relative abundances of top 10 lineages (A: phylum level; B: family level) in the four samples.

Table S1 The fitting  $R_{ct}$  values of exoelectrogens with different NaCl concentrations

	0 NaCl	0.5% NaCl	1.0% NaCl	1.5% NaCl
<i>G. sulfurreducens</i> PCA	322.6 $\Omega$	168.8 $\Omega$	311.1 $\Omega$	687.3 $\Omega$
ESA	213.6 $\Omega$	—	—	166.6 $\Omega$
ESB	224.6 $\Omega$	—	—	463.2 $\Omega$

Table S2 Alpha diversity indices

Sample name	observed_species	shannon	simpson	chao1	ACE	PD_whole_tree
OSA	826	6.0	0.9	856.4	853.8	64.9
ESA	353	2.4	0.6	574.0	636.3	31.6
OSB	478	2.0	0.4	525.1	528.5	38.1
ESB	300	2.1	0.5	362.8	382.2	28.8